City of Tacoma
Department of Public Utilities
Water Division
Tacoma Water

State of Washington
Capital Projects Advisory Review Board (CPARB)
Project Review Committee (PRC)

APPLICATION FOR PROJECT APPROVAL

TO USE THE
GENERAL CONTRACTOR/CONSTRUCTION MANAGER (GC/CM)
ALTERNATIVE CONTRACTING PROCEDURE

Submitted By:
City of Tacoma
Department of Public Utilities
Water Division
(Tacoma Water)

Project:
Green River Filtration Facility

Submitted:
November 1, 2010

TACOMA WATER

3628 South 35th Street

Tacoma, Washington 98409-3192

TACOMA PUBLIC UTILITIES

November 1, 2010

Mr. Bob Dixon, Deputy Assistant Director
General Administration
Engineering & Architectural Services
P.O. Box 41012
Olympia, WA 98504-1012

RE: Tacoma Water Application for General Contractor/Construction Manager (GC/CM) Project Approval to the Project Review Committee (PRC) of the Capital Projects Advisory Review Board (CPARB)

Dear Mr. Dixon:

Attached is Tacoma Water's GC/CM application to the Project Review Committee (PRC) of the Capital Projects Advisory Review Board (CPARB). This application is for the Green River Filtration Facility. While the City of Tacoma has been approved by the PRC as a certified public body to use the GC/CM procedure, the Department of Public Utilities (of which Tacoma Water is a division) operates as a separate department with policy set by a five-member Public Utility Board. Thus, Tacoma Water is submitting this application for approval of a specific project.

Moving forward with the Green River Filtration Facility Project (Project) will bring Tacoma Water into compliance with federal and state regulatory mandates facing the agency. Many other water agencies across our nation are also facing similar situations. The proposed Green River Filtration Facility provides the greatest level of certainty for ensuring regulatory compliance in the future. Following an approximately year long decision process the Tacoma Public Utility Board selected, earlier this year, to move forward with this Project. The Public Utility Board also determined that the GC/CM procedure (as allowed under chapter 39.10 RCW) was the preferred and most appropriate project delivery method, and approved submittal of an application to the PRC. As we have described in our application, the Project is well-suited for the GC/CM project delivery procedure, and meets the criteria outlined in state law. In addition, Tacoma Water has assembled a Project team of employees and consultants with significant experience in not only managing a construction project of this type and size, but with Washington State GC/CM experience.

If you would like any additional information or if there are any questions please call me at (253) 502-8245 or our Water Quality Manager, Chris McMeen at (253) 502-8210.

Sincerely,

Linda McCrea

Linda McCrea
Superintendent

Attachment: Application to the Project Review Committee of the Capital Projects Advisory Review Board

1. Identification of Applicant

(a) Legal name of Public Body (your organization): City of Tacoma, Department of Public Utilities, Water Division (Tacoma Water)
(b) Address: 3628 S. 35th Street, Tacoma, WA 98409-3192
(c) Contact Person Name: Chris McMeen Title: Water Quality Manager
(d) Phone Number: (253) 502-8210 Fax: (253) 502-8721
E-mail: cmcmeen@cityoftacoma.org

2. Brief Description of Proposed Project

Tacoma Water's Green River is an unfiltered surface water supply that currently serves potable water to over 300,000 people and to several wholesale customers through a first diversion water right. Tacoma is also the owner and operator of shared water supply facilities with its Regional Water Supply System (RWSS) Partners – Covington Water District, the City of Kent, and Lakehaven Utility District – providing water through the second diversion water right. Federal and state regulatory requirements are requiring treatment upgrades to unfiltered surface water supplies. This Project includes treatment improvements to the Green River supply to meet these new regulatory requirements.

The Green River Filtration Facility Project improvements will be constructed at the site of Tacoma's Green River Headworks Facilities, located downstream of the Howard Hanson Dam. Much of the work will include modifying the existing facilities, and integrating new facilities into the operation of the existing facilities. The existing treatment facilities include pH adjustment, ozonation, fluoridation and disinfection. The new improvements include the addition and integration of pretreatment and filtration facilities and the supporting improvements. The initial maximum filtration capacity of the new facilities will be 150 million gallons per day (MGD). The improvements will be designed and constructed with the flexibility to efficiently expand to an ultimate filtration capacity of 168 MGD in the future. In addition, the proposed improvements will include a pretreatment capacity of 90 MGD to be used when the facility is operated in a conventional treatment mode. This will occur primarily during periods of seasonally high turbidity in the untreated water supply when pretreatment preceding the filters is required. The proposed improvements include:

- 90 MGD - Pretreatment facilities
- 150 MGD - Filtration facilities
- Residuals (solids) handling, treatment and storage facilities
- Process control and SCADA facilities
- Possible modifications to North Fork Well Field supply and control
- Various modifications and upgrades to existing facilities (chemical feed, ozone feed etc. systems)
- Approximately 15 MG of treated water storage and associated pumping
- Electrical power system upgrades
- Site work including piping, road, storm drainage etc.
- Other upgrades to ancillary systems and utilities

3. Projected Total Cost for the Project:

The Project budget, in 2010 dollars, is shown below. Sales tax and contingency are included within each item.

A. Project Budget

Costs for Professional Services (Engineering, Owner Agent, Legal)	$ 21,000,000
Estimated Project construction costs	$132,400,000
Equipment and furnishing costs	$34,000,000
Off-site costs	$600,000
Contract administration costs	$11,000,000
Other related Project costs (Environmental Mitigation)	$1,000,000
Total (*with sales tax & contingency)*	$200,000,000

B. Funding Status

This is a jointly-funded project between Tacoma Water and Regional Water Supply System (RWSS) Partners including the Lakehaven Utility District, Covington Water District, and the City of Kent. The cost share breakdown is 67% for Tacoma Water and 11% each for the three partners. Recognizing the criticality of secure and stable project funding, both the Public Utility Board and Tacoma City Council (Ordinance 27887) have approved this Project, and support funding the Project as required.

At this stage of the Project, the current cost estimate is between $169 and $217 million (in 2010 dollars). For the Project budget indicated in Section 3A above, a budget of $200 million was used. Once preliminary design begins and a GC/CM is selected, we will be able to bring more precision to the cost estimate. Funding sources include revenue bonds, a Drinking Water State Revolving Fund (DWSRF) loan, Public Works Trust Fund (PWTF) loan (if funded by the State legislature) and cash reserves. Bond and loan repayments will come from utility water rate revenues that are sufficient for repayment of the bonds and loans.

To date the following funding has been secured by Tacoma Water and its supply partners:

-Tacoma Water recently sold $58.5 million of revenue bonds
- Kent and Covington each sold $11.6 million of revenue bonds
- Tacoma Water and Covington jointly have secured a $6.0 million DWSRF loan (1.5% interest)
- Lakehaven and Kent have each secured a $3.0 million DWSRF loan
- Tacoma Water has received approval from the Washington Public Works Board, pending legislative funding, for a $10.0 million PWTF loan (0.5% interest)

The above secured funding totals $92.1 million by Tacoma Water and its Regional Water Supply System Partners. As noted above, the remaining funding for the Project will be secured, at the appropriate time, from the sale of additional revenue bonds, cash reserves, and where possible additional DWSRF and PWTF loans.

4. Anticipated Project Design and Construction Schedule

Anticipated project design and construction schedule, including (1) procurement; (2) hiring consultants if not already hired; and (3) employing staff or hiring consultants to manage the project if not already employed or hired.

Tacoma Water retained HDR and CH2MHill in 2009 to provide technical input to assist Tacoma Water management and its governing Public Utility Board in making a decision regarding the appropriate treatment process for the Green River. The result of this early decision work was to move forward with a water filtration facility. The work also developed a budget, schedule and outline of the required improvements. Tacoma Water, through a competitive selection process, has hired the firm of MWH Americas, Inc. as the Design Engineer for this Project. In addition, Tacoma Water recently hired legal counsel (K&L Gates

LLP, specifically Christopher Hirst and Thomas Wolfendale) to provide support to City of Tacoma City Attorney. Tacoma Water has also selected an Owner Agent consultant for the Project through a competitive selection process (R.W. Beck, with subconsultants Brown and Caldwell and Michael E. Purdy Associates). Tacoma Water also recently hired Randall Krueger as Tacoma Water's Project Manager for all phases of the Project. Randall brings 38 years of design, construction and management experience to his role as Project Manager.

With the above team, coupled with internal Tacoma Water support staff, internal control systems and its Regional Water Supply System Partners, Tacoma Water is ready to begin preliminary engineering design of the improvements. Tacoma Water is also ready, assuming approval by the PRC, to start, in December of 2010, the selection process for its GC/CM. The proposed Project schedule is shown in Attachment A.

Key Project milestones are as follows:

Milestones	**Completion Date**
Start Preliminary Design	November 2010
Advertise for GC/CM	December 20, 2010
Notification of Selected GC/CM	March 14, 2011
Preconstruction Services Negotiated and Contract Executed	April 13, 2011
Complete Preliminary Engineering	June 2011
Begin Early Subpackage Bidding, if Applicable	November 2011
Complete 90% Design and Begin MACC Negotiations	February 2012
Finalize MACC Negotiations	April 2012
Complete Construction Documents	April 2012
Begin Construction	May 2012
Complete Construction	November 2014

5. Why the GC/CM or D-B Contracting Procedure is Appropriate for this Project

Please provide a detailed explanation of why use of the contracting procedure is appropriate for the proposed project. Please address the following, as appropriate:

Between February and May of 2010, Tacoma Water and R. W. Beck evaluated various contracting approaches to procure design and construction services for the filtration facility. Approaches included Design-Bid-Build (DBB), General Contractor/Construction Manager (GC/CM), Design-Build (DB), and Design-Build-Operate (DBO).

At the Public Utility Board's May 26, 2010 meeting, approval was provided (Resolution U-10383) to pursue the use of the GC/CM method of project delivery as allowed under RCW 39.10, and to submit an application for approval of same to the PRC. Key factors in the selection of the GC/CM procedure were the ability to obtain early contractor involvement that is not found in the DBB approach and the ability for strong collaboration between Tacoma Water, Design Engineer and GC/CM. This collaboration is a very important factor because of the critical nature of the facility, and the fact that the improvements must be integrated into existing facilities while the existing treatment systems remain in continuous service and in regulatory compliance. In addition, this collaboration is important to allow significant and ongoing input from Tacoma Water management, engineering and operations staff during design and construction phases. Finally, Tacoma Water strongly believes the GC/CM approach has features that would improve the constructability and operability of the filtration facility and reduce the number of change orders required during construction resulting in a

facility with overall lower life-cycle costs, better performance and increased value to the rate-payers.

- **If implementation of the project involves complex scheduling, phasing, or coordination, what are the complexities?**

  It is imperative that existing treatment facilities remain in continuous operation during construction and that precautions be taken to reduce the possibility of a treatment system upset. An upset could result in improperly treated water being sent down the transmission piping leaving the facilities. The new improvements will need to be integrated into the existing facilities and operations. An example of this is that new and additional chemical storage and treatment facilities will be added inside the existing chemical storage and feed building. Also temporary bypass/flow rerouting facilities will be required. All of this work will require complex scheduling and phasing of the construction activities. The planning, design, construction and operation of these critical plans and facilities will be enhanced with significant input from the GC/CM.

  Our schedule allows bringing on the GC/CM during the preliminary design phase to ensure early involvement of the GC/CM. This early involvement includes, but is not limited to, input into site layout, construction phasing, construction cost estimate and construction schedule.

- **If the project involves construction at an existing facility that must continue to operate during construction, what are the operational impacts on occupants that must be addressed?** ***(Please identify functions within the existing facility which require relocation during construction and how construction sequencing will affect them. As part of your response you may refer to the drawings or sketches that you provide under Question 9.)***

  The treatment facilities provide potable water to existing Tacoma Water direct service area, wholesale customers as well as the three Regional Water Supply System Partners. The treatment facilities must remain in operation 24 hours per day. The treatment operations and resultant water quality must comply with substantial federal and state water regulatory requirements. As noted in the previous section, treatment upsets and interruptions could result in improperly treated water being sent down the transmission piping leaving the facilities.

  Integration of the new improvements will require substantial planning and phasing of the construction work. Special design and construction features and tie-ins will be required. Early involvement of the contractor in the process allows for the operators and contractor to engage in discussions during design and advise the design engineer on issues important to reducing construction related operation problems.

- **If involvement of the GC/CM is critical during the design phase, why is this involvement critical?**

  The Project requires GC/CM participation during the design phase in order to properly anticipate and address special construction issues, environmentally sensitive constraints, phasing challenges, continuous operation of the facility during construction while maintaining regulatory compliance, early equipment procurement and delivery, and cost controls.

  One construction issue that needs early attention is regarding soils that exhibit a high degree of liquefaction. A significant portion of the site has these types of underlying

soils. There are various ways to provide mitigation measures for facility foundations and early input and recommendations from the GC/CM is important.

Also, the construction site is within a protected, environmentally sensitive watershed and this will require special attention and construction measures. Early involvement by the GC/CM will help address this issue.

As previously noted and stressed, the facility must continue to operate during construction to supply potable water and meet regulatory requirements. During the design and document preparation phases, the GC/CM will coordinate with the Design Engineer and operations staff to develop detailed scenarios for phasing construction that address rerouting flows, construction of temporary facilities and integration of new facilities into existing treatment systems and buildings. By coordinating during the design phase of the Project, there will be greater opportunity to efficiently and effectively balance operational and construction requirements. This type of early collaboration is not possible with conventional DBB project delivery.

In addition, water treatment equipment is complex and specialized and often requires lengthy lead times for fabrication and delivery. For the Project to remain on schedule, the GC/CM, Design Engineer and Tacoma Water staff will need to determine, during the preconstruction services period, the equipment requirements including the lead time for this equipment. It is expected that this determination will result in the need for early procurement of some bid packages in accordance with RCW 39.10.380 and .390. The GC/CM will also likely have more accurate local costing information than the design team which will enable better design decisions.

- **If the project encompasses a complex or technical work environment, what is this environment?**

  The existing and proposed treatment facilities and water conveyance/hydraulic systems comprises multiple treatment processes and structures connected through an array of pipes, treatment processes and electrical/instrumentation systems. The treatment facilities include processes sensitive to weather/storm conditions (raw water quality changes) and chemical balances that must be carefully monitored and controlled. In addition, the available site area for the improvements is constrained by surrounding terrain and wetlands.

  Early GC/CM involvement in the design phase will help minimize disruptions to crucial operations, and likely reduce changes during the construction phases which may favorably impact overall Project cost and schedule.

- **If the project requires specialized work on a building that has historical significance, why is the building of historical significance and what is the specialized work that must be done?**

  The Project does not involve work on buildings with historical significance.

6. Public Benefit

In addition to the above information, please provide information on how use of the GC/CM or D-B contracting procedure will serve the public interest. For example, your description must address, but is not limited to:

- **How this contracting method provides a substantial fiscal benefit; or**

- **How the use of the traditional method of awarding contracts in a lump sum (the "design-bid-build method") is not practical for meeting desired quality standards or delivery schedules.**

The GC/CM contracting method will provide a fiscal benefit through:

- Greater cost certainty associated with the Maximum Allowable Construction Cost (MACC)
- Reduced claims risk
- Reduced change orders because of early GC/CM involvement with the Project
- Opportunity to optimize the design for cost savings through early construction contractor input
- Greater construction contractor input, concurrent with operator input, which means the facilities will be better constructed for life-cycle savings

Under GC/CM, Tacoma Water will be able to select the most qualified contractor based on qualifications, project approach, interviews, and bidding of limited items, rather than solely on the lowest price. Recent changes to RCW 39.10 also extends the benefits of using the GC/CM contracting method down to the subcontractor level by establishing an alternative early selection process for mechanical and/or electrical subcontractors, providing additional fiscal benefits.

Repeat work is a strong motivator for GC/CM contractors. Experienced GC/CM contractors understand that their ability to get the next project will be greatly enhanced by Tacoma Water's judgment of their performance. This helps foster an environment where Tacoma Water's concerns are considered a high priority and resolved without getting into disputes.

The Green River Filtration Facility Project is a complex and technical project requiring early interaction of the GC/CM with the design team to ensure successful completion. The GC/CM process is preferred over DBB because during design the GC/CM can provide detailed input on construction issues that enhance long-term operations. The GC/CM will also collaborate with Tacoma Water and the Design Engineer during the design phase to select materials, systems, and design details that take advantage of market conditions and facilitates constructability. The GC/CM approach will also allow for earlier procurement of long lead time equipment, instead of waiting for construction documents to be completed.

The GC/CM involvement during design reduces construction problems and leads to more efficient management of the construction process than with DBB. The GC/CM adds price certainty by preparing a series of estimates as the design progresses to corroborate the estimates of the design engineer. Selection of a GC/CM will also include value engineering experience to identify additional cost saving activities/measures.

The GC/CM process enables price competition on all construction subcontracts, which takes advantage of competitive pricing in the marketplace. The GC/CM will likely generate a broad response from subcontractor bidders by utilizing local contacts and relationships in the subcontractor community to encourage competition.

7. Public Body Qualifications

Please provide:

- **A description of your organization's qualifications to use the GC/CM or D-B contracting procedure.**

Tacoma Water has been conducting and managing major construction projects for many years using in-house resources supplemented by outside consultants. Tacoma Water has several licensed engineers with facilities construction experience. Tacoma Water has not, to date, used a GC/CM or DB process approach on these past projects. For this Project Tacoma Water has hired a Project Manager, Randall Krueger as an employee of Tacoma Water. Mr. Krueger, a licensed professional engineer in the State of Washington and has 38 years of design, construction and management experience in the municipal water field. A number of his projects utilized alternative delivery approaches including DB, CM/GC, and CM at Risk. He does not have Washington State GC/CM experience but is quickly becoming familiar with Washington State regulatory requirements, specifically RCW 39.10. The focus of Mr. Krueger's time is 100% on the Project from the start of the preliminary design phase through facility startup and commissioning. Tacoma Water has also added to its Project team the legal counsel of Christopher Hirst and Thomas Wolfendale of K&L Gates, LLP for specialty legal services in support of the GC/CM approach. In addition, Tacoma Water has added Owner Agent consultant support through the firm of R.W. Beck in association with Brown & Caldwell and Michael Purdy Associates, which brings significant Washington State GC/CM experience to the Project team. Tacoma Water, with its consultants and internal staff, is developing procedures and implementation plans to ensure the successful completion of this Project. In addition, to better prepare the Tacoma Water Project Team, Mike Purdy will conduct a one day workshop regarding GC/CM procedures and practices.

Tacoma Water's team has the qualifications and tools to move forward successfully with delivering the Project through the GC/CM project delivery method.

- **A Project organizational chart, showing all existing or planned staff and consultant roles. Note: The organizational chart must show the level of involvement and main responsibilities anticipated for each position throughout the project (for example, full-time project manager). If acronyms are used, a key should be provided.**

  The organization chart (Attachment B) provides a summary of the organizational structure and key responsibility positions. Key staff and consultant personnel are indicated. An accompanying table indicates staff estimated time involvement.

- **Staff and consultant short biographies (not complete résumés).**

Chris McMeen, P.E. – Water Quality Manager (Tacoma Water)
Role: Tacoma Water's Project Director with overall management responsibility for the Project.
Relevant Experience: Mr. McMeen has 23 years of experience in the drinking water field, working as an engineering consultant, a State drinking water regulator, and as a utility engineer and manager. He has managed Tacoma's Water Quality Section for the past six years, overseeing the design, construction, start-up, and operation of over $50 million in site civil, water treatment, conveyance, and environmental mitigation projects. He holds Bachelor and Master's degrees in Civil Engineering, is a licensed professional engineer in the State of Washington, and is a licensed Certified Operator.

Randall Krueger, P.E. – Project Manager (Tacoma Water)
Role: Project Manager for the design, construction and startup/commissioning of the Project
Relevant Experience: Randall has over 38 years of experience in design, construction and management in the municipal water field. A number of his projects utilized

alternative delivery methods including DB, CM/GC, and CM at Risk. Prior to his employment by Tacoma Water, he retired in March of this year from Black & Veatch Corporation where he served as a senior project manager/project director and also as an officer, Vice President, in the firm. His has been project engineer or project manager on over 24 water treatment facilities with capacities between 1 and 125 MGD.

Alternative delivery projects where Mr. Krueger served as either Project Manager or Project Director include:

- Pipeline project for City of Gresham, where Black & Veatch (B&V) held the DB contract.
- Four treatment plant projects (3 – water and 1 - wastewater) where B&V was first hired by the utility agency as the Design Engineer but then, near completion of design, B&V was contracted as the CM at Risk.
- Two projects for the City of Salem (1 – interceptor sewer and 1 – large wastewater treatment improvement project) where B&V was the City's design and construction support engineer for CM/GC projects.

More details regarding these alternative delivery projects are included in Attachment C.

Other recent Project Manager or Project Director examples for Mr. Krueger include:

- Salem, OR Water Treatment and Supply Expansion – Project Manager for $140 million upgrade and expansion of City's water treatment, storage and supply transmission system. Services included planning, design, construction management and startup/commissioning services.
- Salem, OR Wastewater Treatment and SSO Abatement Project – Project Director for Facility Planning and Schematic Design for $130 million improvements to the City's wastewater treatment and conveyance system.
- City of Soledad, CA Water Reclamation Facility – Project Manager for new $50 million water reclamation facility that meets California Title 22 requirements. Services included facility planning, design, construction management and startup/commissioning services.

Ward Groves - Deputy City Attorney (City of Tacoma)
Role: Tacoma Water Project Legal Counsel
Relevant Experience: Mr. Groves has been with the Tacoma City Attorney's Office since 2000. He is and has been the lead contract and procurement attorney for the City's Department of Public Utilities for the past six years and possesses considerable knowledge in the areas of municipal utility and public contract law. Mr. Groves has extensive experience in drafting, negotiating, and enforcing contracts for public works and improvements, professional services, and supplies acquisition. Mr. Groves was the legal advisor for the City of Tacoma's recent revision and update of its municipal purchasing code and is intimately familiar with the purchasing policies, procedures, and practices utilized by the City and its Department of Public Works.

Prior to his employment with the City of Tacoma, Mr. Groves was in private practice with a small Tacoma law firm for seven years. During that time, his primary areas of practice included commercial and contract law, real estate law, and litigation.

Christopher Hirst – Legal Counsel Support (K&L Gates, LLP)
Role: Support to Tacoma Water legal counsel with primary involvement in GC/CM Procurement
Relevant Experience: Mr. Hirst practices in the areas of municipal and education law. He represents public entities in various forms of administrative disputes and provides

primary outside counsel advice to them. He is a frequent speaker and presenter at seminars and client training sessions. He is a member of the Capital Projects Advisory Review Board. He has consulted and been involved in a number of school projects using GC/CM. Attachment C includes a list of his GC/CM Experience. He is also a member of the board of the Future of the Law Institute of the King County Bar Foundation, which seeks to encourage minority and disadvantaged youth to consider careers in law.

He has many years of experience assisting public owners with traditional and alternative construction procurement methods; successful defense of construction bid protests; and successfully developed and implemented strategies for analysis and mediated settlements of construction claims.

Thomas Wolfendale – Legal Counsel Support (K&L Gates, LLP)
Role: Support to Tacoma Water legal counsel with primary involvement in contractual matters
Relevant Experience: Mr. Wolfendale has 37 years of practice experience in including construction contracts and projects, environmental civil and criminal matters, municipal governance, and land use issues. Mr. Wolfendale has counseled a number of Washington public entities on the use of GC/CM alternative procurement from inception of design services through completion and project closeout. Attachment C includes a list of his GC/CM experience. Mr. Wolfendale has served as chair of the Uniform Contracts, Rules and Regulations Subcommittee of the Washington State Bar Association (WSBA) section on Public Procurement and Contract Law, currently serves as the Chair-Elect of the WSBA Construction Law Section and was an executive board member of both the Environmental and Land Use Law and Public Procurement and Private Construction Law Sections of the WSBA.

Craig Downs, P.E. – Water Quality Engineer Supervisor (Tacoma Water)
Role: Tacoma Water engineering support in area of regulatory, water quality, and facilities
Relevant Experience: Craig has over 15 years of experience in the drinking water field. For 9 years he worked as a Regional Engineer in the Washington State Drinking Water Program. In that role Craig reviewed designs and inspected a wide variety of drinking water facilities, including conventional water treatment plants. During his 6 years with Tacoma Water Craig has worked in a variety of engineering roles within the Water Quality section, responsible for all system treatment facilities. On the Green River Treatment Plant Ozone Facilities and Operations Building project, Craig served as the on-site project engineer during construction of 168 MGD ozone treatment facility and operations building. Craig currently supervises engineering staff that provide engineering and design support for all treatment facilities in the system, and mechanics that operate and maintain disinfection treatment for approximately 60 MGD of groundwater in Tacoma. Craig is a licensed Professional Engineer in the State of Washington, holds Bachelor's and Master's degrees in Civil Engineering, and is a state certified Water Distribution Manager 3.

Hilary Lorenz – Treatment Facility Operations Manager (Tacoma Water)
Role: Manage Tacoma Water Operations input and participation in Project.
Relevant Experience: Since 1985, Hilary Lorenz has worked in the drinking water field as an operator, supervisor, and treatment manager. He has provided regulatory and operational guidance for small Group A water systems, and participated in the design review, start-up, optimization, and operation of the Seattle Public Utilities Design, Build and Operate (DBO) Tolt Treatment Facility. Hilary holds a Level IV certification in both

Water Distribution Manager and Water Treatment Plant Operator with the Washington State Department of Health, and a Bachelor's degree in Public Water Policy.

Art Griffith, P.E. – Owner Agent Support Project Manager (R.W. Beck Subconsultant)
Role: Provide advice throughout the Project from procurement of GC/CM through completion of construction
Relevant Experience: Mr. Griffith's expertise includes management of teams and projects containing multiple technical disciplines; management of complicated projects with multiple subconsultants; communication of complex contractual, financial, and technical issues to multiple audiences, including non-technical audiences; capital project oversight and owner agent services involving GC/CM contracting, DB contracting, and DBB contracting. Specific projects in a project management role include Oversight Monitoring Consultant for King County's Brightwater Treatment System, Tacoma Water's evaluation of Alternative Project Delivery Methods, City of Everett WPCF Phase C expansion owner advisor, and the Regional Wastewater Treatment Plant Authority Management Program and Delivery Analysis. Mr. Griffith's role in Everett is to manage the team that is currently putting preparing GC/CM procurement documents. His role for King County is to provide comments to the County Auditor's office and County Council on aspects of the Brightwater Treatment System related to cost, schedule, management, and risk. This includes tracking of the status of GC/CM buyout, use of risk contingency and buyout savings, overall project costs, and overall project performance.

Robert Bingham, P.E. – Owner Agent Support - Procurement Lead (R. W. Beck Subconsultant)
Role: Provide advice throughout the Project; assist in the development of contracts and procedures for the procurement, preconstruction, construction, and closeout phases of the Project.
Relevant Experience: Mr. Bingham has provided planning and engineering services for municipal utilities, particularly in the area of facility development using alternative project delivery approaches, many of which were in the state of Washington. Alternative delivery projects on which he has served as project manager and/or lead advisor include City of Everett WPCF Phase A Expansion (GC/CM), City of Tacoma Central Treatment Plant Expansion (DB), City of Seattle Tolt River Treatment Plant (DBO), Cedar River Treatment Plant (DBO), City of Wilsonville Oregon Wastewater Treatment Plant (DBO) and City of Bellingham Post Point Wastewater Treatment Plant Improvements (GC/CM). He additionally served as an oversight consultant on the King County Brightwater Project (GC/CM, DB, and DBB). He has implemented alternative delivery on more than 15 projects with a capital value in excess of $1.5 billion.

Mr. Bingham's specific project experience that is most relevant to the Green River Filtration Facility Project includes:

- City of Everett WPCF Phase A Expansion (GC/CM). Mr. Bingham served as the Owner's advisor and project manager during the entire project, from the initial decision to use GC/CM through project closeout. In that role he prepared all procurement documents and assisted in the selection of the GC/CM, prepared the Preconstruction and Construction Contracts, assisted in independent cost estimates and MACC negotiations, development of construction management procedures, and provided advice to the City during the construction phase, including advice on project buyout, use of contingencies, and other matters.
- City of Bellingham Post Point Wastewater Treatment Plant Improvements (GC/CM). Mr. Bingham is serving as the Owner's advisor for the entire project, from the initial

decision to use GC/CM through project closeout. He is responsible for all procurement documents and assists in the selection of the GC/CM, prepares the Preconstruction and Construction Contracts, assists in independent cost estimates and MACC negotiations, develops construction management procedures, and provides advice to the City during the construction phase.

- Brightwater Wastewater Treatment Program. This Owner's Advisor assignment ($800,000 contract value) began in 2003 and is ongoing. Between 2003 and 2006 Mr. Bingham served as lead advisor to the King County Auditor's Office, related to the development of the King County Brightwater Wastewater Program. This work included extensive reviews of all aspects of the project, including the GC/CM contract for the Brightwater Wastewater Treatment Plant. Work related to the GC/CM portion of the contract included a "best practices" analysis of the proposed GC/CM process and recommendations regarding improvements, identification and evaluation of issues related to engineering design, preliminary GC/CM cost estimates, and MACC negotiations. It also included review and identification of improvements to the GC/CM project management plan, tracking of the status of project bidding, buyout, and overall project costs and estimated costs to complete.
- Owner's advisor for major alternative delivery projects developed under RCW 39.10. Beginning in 1993, Mr. Bingham has served as the project manager for Owner's Advisor services to major projects in the Puget Sound region that have been constructed and are now operating successfully. These projects include the Tacoma Central Treatment Plant Design Build Project, The City of Seattle Tolt River Treatment Plant DBO and the City of Seattle Cedar River Treatment Plant DBO. On these projects Mr. Bingham was involved in all phases of the project, from initial RFP and contract development through construction and start-up.

Mike Purdy – Owner Agent Support - Contracts Lead (R. W. Beck Subconsultant)
Role: Provide strategic GC/CM guidance and develop and review procurement and contracting documents.
Relevant Experience: With more than 30 years of experience as a manager in public contracting and procurement with some of the largest government agencies in the State of Washington, Mike Purdy is one of the State's most experienced and respected leaders and experts in public contracting, including GC/CM.

As the Contracts Manager at the University of Washington, Mr. Purdy was a key player in the selection, contracting, and administration of more than a dozen GC/CM projects at the University (Clark Hall Renovation, Health Sciences Center H-Wing Renovations, Denny Hall Renovation, Guggenheim Hall Renovation, Construction of New Business School PACCAR Hall, New Student Housing and Renovation Project, Husky Union Building Renovation and Expansion, Construction of New Molecular Engineering Building, Savery Hall Renovations, UW Tower Data Center, UW Medical Center Expansion Project, UT Tacoma, Phase 3, Washington Dental Services Building for Early Childhood Oral Health).

Mr. Purdy served in a similar role for three multi-million dollar GC/CM housing redevelopment projects when he was the Contracting and Procurement Manager at the Seattle Housing Authority.

As the Principal of Michael E. Purdy Associates, Mr. Purdy has provided consulting services and document development, helping guide three public agencies with their first GC/CM projects: LOTT Alliance for the $31 million upgrade to their Budd Inlet Treatment Plant, Sound Transit for the $115 million University of Washington Station project, and

the City of Bellingham for the $48 million Post Point Wastewater Treatment Plant Improvements project.

Charles Bromley, P.E. - Engineer Project Manager (MWH)
Role: Manage MWH engineering services through completion of construction, start-up and commissioning
Relevant Experience: Charles brings to this Project 30 years of experience with planning, design and construction of municipal water treatment facilities. His project engineering and management experience is based on more than 25 water treatment facilities spanning across the US. One of his notable projects, include the River Mountains Water Treatment Facility ($190 M) for the Southern Nevada Water Authority. Mr. Bromley began work on the project as a member of the predesign team, served as project engineer through 75% design completion, and served as project manager through 100% design completion. Additionally, he was located in the field during the 4.5 year construction period. He managed a team of 15 field engineers through all aslpects of construction, start-up, training and commissioning, working directly with the owner and contractor to resolve field issues to complete the project.

Mr. Bromley's experience has included a number of alternative delivery projects including CM/GC, DB and CM at Risk. A listing of his alternative delivery projects is included in Attachment C.

Michael Price, P.E. – Engineer Design Manager (MWH)
Role: Lead the overall design services
Relevant Experience: Michael has 20 years of experience in water treatment planning, design and construction and operation. For six years, he worked in operations at East Bay Municipal Utility District, which operates three large direct filtration plants and three large conventional treatment plants. From this experience, he brings to his design work, a strong operations perspective. He has managed the design of more than 15 Water Treatment Plant projects. Because of his operations background, he conducted start-up training for many of his design projects and assisted in optimizing plant processes. In addition to traditional DBB project, he has participated in a number of alternative delivery projects. He has a keen understanding of the benefits the GC/CM process brings to the design and construction of a project by having early and continuous, collaborative input from the GC/CM project partner. Examples of his alternative delivery projects are listed in Attachment C.

Jude Grounds – GC/CM Engineering Coordination and Engineer Representative During Construction (MWH)
Role: Manage design collaboration with GC/CM and engineer representative during construction, startup and commissioning.
Relevant Experience: Jude's primary expertise and experience is in the area of water treatment plant process design, construction, start-up and commissioning. He has managed the design and serves as project/resident engineer during construction and start-up for both new construction and retrofits of treatment facilities throughout the western US, all of which were delivered using alternative project delivery methods. Relevant and recent project examples of his include:

- Tri-City WPCP Phase 1 Plant Expansion, Clackamas, OR: $80 M CM/GC project.
- Kelly Butte Reservoir project, Portland Water Bureau - Portland, OR: $60 M CM/GC project.
- NCCWC WTP, Clackamas, OR: New $13 M CM/GC Project.
- Willamette River WTP, Wilsonville, OR: New $45 M DB project.

Mr. Grounds also currently serves as the active Chair for the Pacific Northwest Section American Water Works Association Water Treatment Committee.

- **Provide the *experience and role on previous GC/CM or D-B projects* for each staff member or consultant in key positions on the proposed project.**

  Refer to Attachment C for additional team experience on alternative delivery projects.

- **The qualifications of existing or planned for project manager and consultants.**

  Tacoma Water's Project Manager, Randall Krueger has 38 years of experience in the design and construction management municipal water field. This experience has been though his previous employment with Black & Veatch Corporation. He has served as project manager on over 75 individual projects during this time period, including over 24 Water Treatment Facilities. In the past 15 years, several projects have included alternative delivery methods including DB, CM/GC and CM at Risk.

  As noted within this application, Tacoma Water has assembled design and other supporting consultants for this Project. These consultants include MWH (engineer), K&L Gates, LLP (legal counsel support) and R.W. Beck with Brown & Caldwell and Mike Purdy (Owner Agent). These consultants are leading experts in their specific fields of practice and are also very experienced in Washington State GC/CM procurement/contracting and project delivery execution.

  Refer to bios (above) and Attachment C for Team alternative delivery experience.

- **The qualifications of an interim project manager until your organization has employed staff or hired a consultant as the project manager. Also indicate whether sufficient funds are available for this purpose and how long it is anticipated the interim project manager will serve. Note: This information is required only if your organization has yet to select a project manager at the time of application.**

  Not applicable. Randall Krueger is an employee of Tacoma Water and has been assigned as Project Manager.

- **A brief summary of the construction experience of your organization's project management team that is relevant to the project.**

  Attachment D summarizes Tacoma Water relevant construction history that involved staff from our Project management team.

- **A description of the controls your organization will have in place to ensure that the project is adequately managed.**

  Tacoma Water will implement and apply management tools and practices to control the scope, schedule and budget throughout alternatives analysis, preliminary engineering, final design/document preparation, procurement, construction and startup and commissioning.

  The project controls will provide:
  - Clear, accessible, and accurate information on cost, schedule, and scope
  - Appropriate performance measures for cost, schedule and scope for management.

- Through configuration management and document control to assure Project participants are working with a common basis of information.
- Efficient work collaboration with all parties.

Tacoma Water's Project Team has developed a Responsibility Matrix specific to GC/CM (included in Attachment E). During the initial Project work, Tacoma Water and support consultant advisors will develop project specific GC/CM management plans and procedures covering all aspects of the Project.

- **A brief description of your planned GC/CM or D-B procurement process.**

Tacoma Water's GC/CM procurement process will be based on best practices, input from consultants and internal staff, requirements in RCW 39.10, and advice from other organizations and public agencies. The selection process will include initial proposals focused on bidder qualification and project approach, interviews of qualified firms, and then final proposals for percent fee and specified general conditions work. The firm with the highest total score from the scoring of proposals, interview and final proposal will be selected to provide preconstruction services and participate in MACC negotiations. In the unlikely event of a tie, the firm with the lowest proposal price will be selected.

Following is a listing of the key steps:

Activity	Date
PRC Application Submittal	1-Nov-10
PRC Presentation and Decision	2-Dec-10
Issue RFP	20-Dec-10
Pre-Proposal Meeting	7-Jan-11
Proposal Submission Deadline	21-Jan-11
Proposal Review Complete	4-Feb-11
Interview Short-List Firms	17-Feb-11
Notify Finalists	18-Feb-11
Issue RFFP	25-Feb-11
Final Proposal Deadline	14-Feb-11
Notification of Selected GC/CM	14-Mar-11
Preconstruction Work Plan Due	23-Mar-11
Preconstruction Contract Signed	13-Mar-11
Begin MACC Negotiations	Feb 2012
GC/CM Contract Signed	Apr 2012
Begin Construction	May 2012

- **Verification that your organization has already developed (or provide your plan to develop) specific GC/CM or D-B contract terms.**

Starting in October and extending through early December 2010, Tacoma Water will review contract terms and conditions and modify them to reflect RCW 39.10, as well as specifics of the Green River Filtration Facility Project. Tacoma Water will work internally with its City attorney and outside legal counsel, in-house staff, and consultants to produce language that addresses the requirements specific to the

GC/CM alternate procurement method. Tacoma Water will also review the GC/CM general conditions and contracts of other agencies. It is noted that the City of Tacoma has experience with GC/CM contracting and this experience can be referenced to determine if it is applicable or not.

8. Public Body (your organization) Construction History:
Provide a matrix summary of your organization's construction activity for the past six years outlining project data in content and format per the attached sample provided:

- **Project Number, Name, and Description**
- **Contracting method used**
- **Planned start and finish dates**
- **Actual start and finish dates**
- **Planned and actual budget amounts**
- **Reasons for budget or schedule overruns**

Refer to Attachment F for the matrix summary.

9. Preliminary Concepts, sketches or plans depicting the project
To assist the PRC with understanding your proposed project, please provide a combination of up to six concepts, drawings, sketches, diagrams, or plan/section documents which best depict your project. In electronic submissions these documents must be provided in a PDF or JPEG format for easy distribution.

- **A overview site plan (indicating existing structure and new structures)**
- **Plan or section views which show existing vs. renovation plans particularly for areas that will remain occupied during construction.**

Attachment G contains a baseline site layout plan and two aerial views showing the existing facilities with the baseline treatment option layout and another view showing a more compact treatment layout. The preliminary design phase will include an evaluation of these two layout configurations and the various equipment and facility needs to accommodate each layout alternative.

10. Resolution of Audit Findings on Previous Public Works Projects

If your organization had audit findings on any project identified in your response to Question 8, please specify the project, briefly state those findings, and describe how your organization resolved them.

There are no audit findings for projects identified in Question 8.

Caution to Applicants

The definition of the project is at the applicant's discretion. The entire project, including all components, must meet the criteria to be approved.

Signature of Authorized Representative

In submitting this application, you, as the authorized representative of your organization, understand that: (1) the PRC may request additional information about your organization, its construction history, and the proposed project; and (2) your organization is required to submit the information requested by the PRC. You agree to submit this information in a timely manner and understand that failure to do so shall render your application incomplete.

Should the PRC approve your request to use the GC/CM or D-B contracting procedure, you also understand that: (1) your organization is required to participate in brief, state-sponsored surveys at the beginning and the end of your approved project; and (2) the data collected in these surveys will be used in a study by the state to evaluate the effectiveness of the GC/CM or D-B process. You also agree that your organization will complete these surveys within the time required by CPARB.

Linda McCrea

Name (please print) LindaMcCrea

Title: Water Superintendent

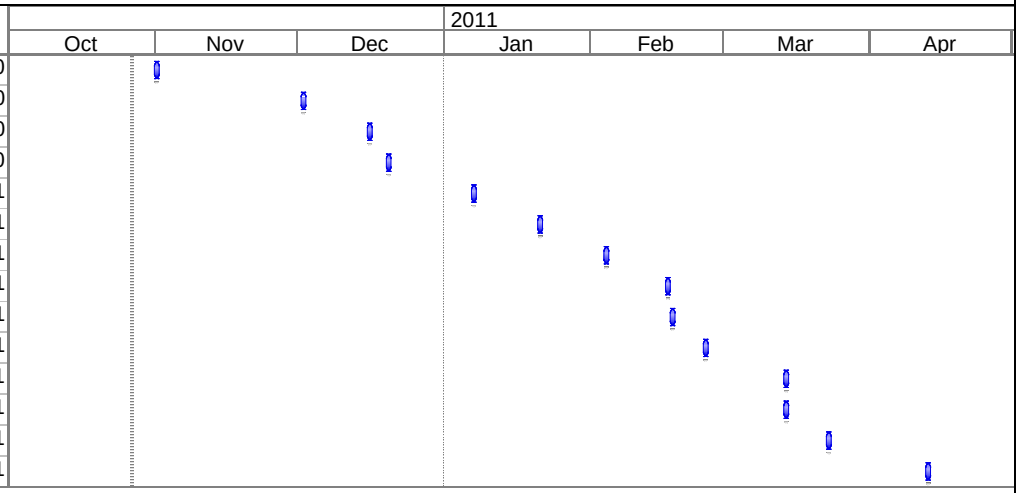
Date: 10/29/10

Attachment A

Project Schedule - Tentative GC/CM Selection Schedule

ATTACHMENT A - PROJECT SCHEDULE
TENTATIVE GC/CM SELECTION SCHEDULE

ID	Task Name	Duration	Start
1	PRC Application Submittal (Nov. 1)	1 day?	Mon 11/1/10
2	PRC Presentation and Decision (Dec 2)	1 day?	Thu 12/2/10
3	Receive Project Approval from PRC (Dec 16)	1 day?	Thu 12/16/10
4	Publication of RFP for GC/CM (Dec 20)	1 day?	Mon 12/20/10
5	Pre-Proposal Meeting (Jan 7)	1 day?	Fri 1/7/11
6	Proposal Submission Deadline (Jan 21)	1 day?	Fri 1/21/11
7	Proposal Review Complete (Feb 4)	1 day?	Fri 2/4/11
8	Interview Short-List Firms (Feb 17)	1 day?	Thu 2/17/11
9	Notify Finalists (Feb 18)	1 day?	Fri 2/18/11
10	Issue RFFP (Feb 25)	1 day?	Fri 2/25/11
11	Final Proposal Deadline (Mar 14)	1 day?	Mon 3/14/11
12	Notification of Selected GC/CM (Mar 14)	1 day?	Mon 3/14/11
13	Preconstruction Work Plan Due (Mar 23)	1 day?	Wed 3/23/11
14	Preconstruction Contract Executed (Apr 13)	1 day?	Wed 4/13/11



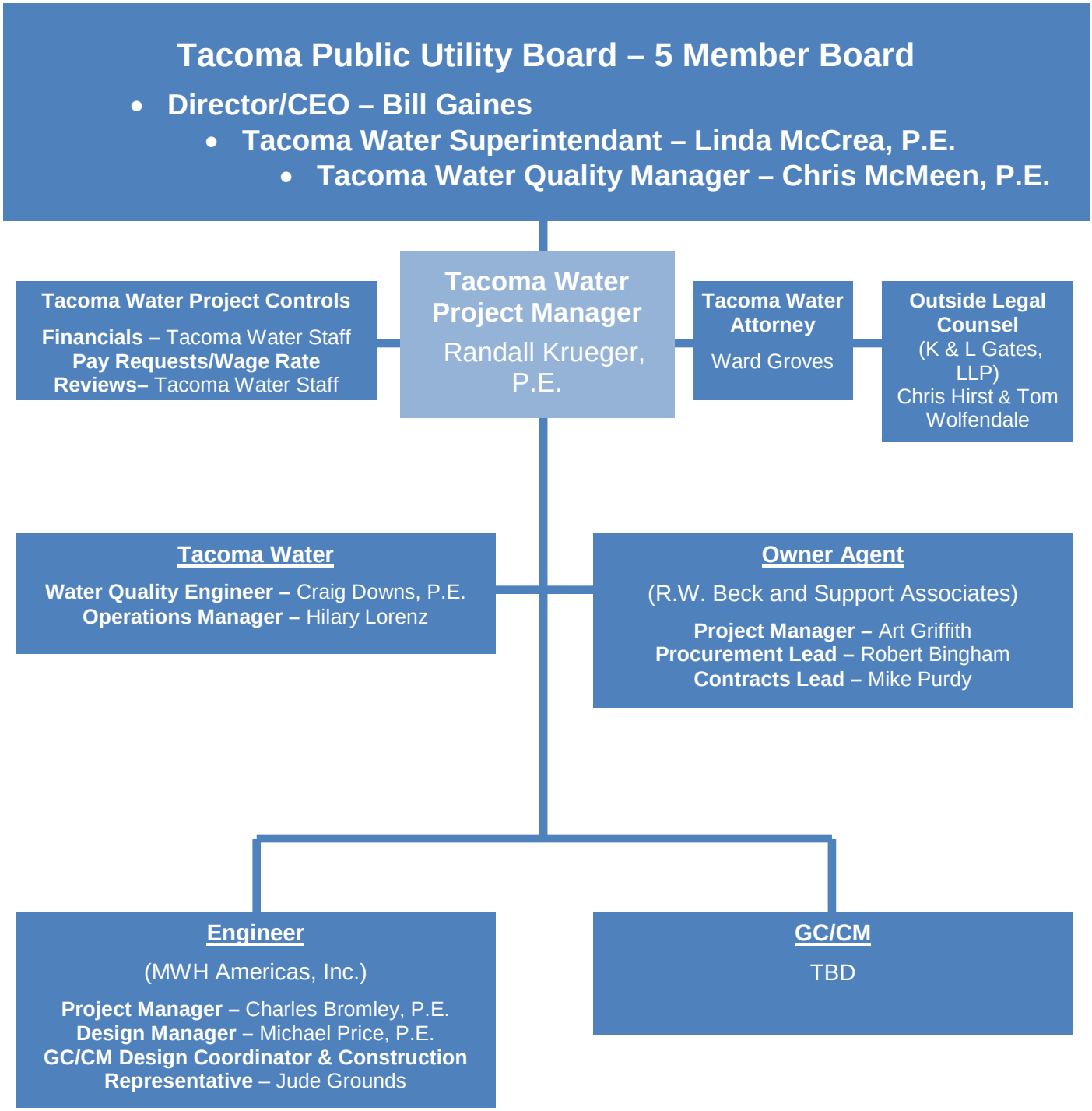
Project: PRC Attachement A - Proj Scl
Date: Wed 10/27/10

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

Attachment B

Project Organization and Project Team Availability

Attachment B: Project Organization



Page 2 of Attachment B - Project Team Availability

Individual	GC/CM Procurement and Contracts	Preconstruction Phase	Construction Phase
Chris McMeen (TW)	35%	35%	35%
Randall Krueger (TW)	100%	100%	100%
Ward Groves (TW)	25%	10%	10%
Chris Hirst (K&L Gates)	25%	10%	10%
Tom Wolfendale (K&L Gates)	25%	10%	10%
Craig Downs (TW)	10%	35%	25%
Hilary Lorenz (TW)	10%	50%	50%
Art Griffith (R. W. Beck)	25%	25%	25%
Bob Bingham (R. W. Beck)	25%	25%	15%
Mike Purdy (Michael E. Purdy Associates as subconsultant to R. W. Beck)	25%	10%	10%
Charlie Bromley (MWH)	100%	100%	50%
Michael Price (MWH)	-	100%	25%
Jude Grounds (MWH)	15%	50%	100%

Attachment C

Additional Team Experience on Alternative Delivery Projects

Attachment C - Additional Team Experience on Alternative Delivery Projects

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Randall Krueger, P.E.	38 Years of experience in planning, design, construction and management of municipal water supply and treatment projects including over 24 water treatment facilities.	Tacoma Water	City of Salem, OR - Water treatment plant improvements (B&V teamed with Carollo)	$100 million	CM/GC	Project Director for B&V	Project Director for B&V
			City of Gresham, OR - Two transmission pipelines - 3.5 miles in length	$7.3 million	DB by B&V and Partner (Western Summit Construction)	Project Manager	Project Manager
			Oak Lodge Sanitary Dist. - Clackamas, OR - 48" diameter outfall in Willamette River	$1.5 million	CM at Risk	Project Director	Project Director
			Clackamas River Water District - Clackamas, OR - 2 separate improvement projects (filtration and disinfection improvements) at water treatment plant	$1.2 million	CM at Risk	Project Manager	Project Manager
			City of Salem, OR - Downtown interceptor sewer	$3.5 million	CM/GC	Project Manager	Project Manager
			Umpqua Basin Water Association, Roseburg, OR - Water Treatment Plant improvements	$1.3 million	CM at Risk	Project Manager	Project Manager

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Charles Bromley, P.E,	30 Years of experience in planning, design and construction of municipal water projects including over 25 water treatment facilities	MWH	Tri-City Water Pollution Control Plant - Clackamas, OR	$80 million	CM/GC	Specifications Engineer	-
			Quartz Hill Water Treatment Plant - Palmdale, CA	$61 million	CM at Risk	Ozone Lead Design	Training & startup assistance, RFI & shop drawing review assistance
			Eastside Water Treatment Plant - Pear Blossom, CA	$7 million	CM at Risk	Ozone Lead Design	Training & startup assistance, RFI & shop drawing review assistance
			Acton Water Treatment Plant - Palmdale, CA	$3.4 million	CM at Risk	Ozone Lead Design	Training & startup assistance, RFI & shop drawing review assistance
			Rosamond Water Treatment Plant - Palmdale, CA	$17 million	CM at Risk	Ozone Lead Design	Training & startup assistance, RFI & shop drawing review assistance
			Willamette River Water Treatment Plant - Wilsonville, OR	$45 million	DB	Design Engineer	Submittal Review, Startup assistance
			Delaware River Water Treatment Plant - Delran, NJ	$90 million	GC/CM Variation	Project Engineer	Startup & training assistance, resident engineer
			North Cape Reclamation Facility - Cape Coral, FL	$40 million	CM at Risk	Project Engineer	-

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Jude Grounds	11 Years of design, MWH construction and management experience in the water field. Experience includes significant construction resident and facility start-up.	MWH	Tri-City Water Pollution Control Plant - Clackamas, OR	$80 million	CM/GC	Project Manager	Resident Engineer CM/GC Coordinator
			Kelly Butte Reservoir Project - Portland Bureau of Water Works	$60 million	CM/GC	Design Manager	Resident Engineer, CM/GC Coordinator
			NCCWC Water Treatment Plant Expansion	$13 million	CM/GC	Design Manager	Resident Engineer CM/GC Coordinator
			Willamette River Water Treatment Plant - Wilsonville, OR	$45 million	DB	Project Engineer	Resident Engineer
			Quartz Hill Water Treatment Plant - Palmdale, CA	$61 million	CM at Risk	Design Engineer	CM/GC Coordinator
			Eastside Water Treatment Plant - Pear Blossom, CA	$7 million	CM at Risk	Design Engineer	CM/GC Coordinator
			Acton Water Treatment Plant - Palmdale, CA	$3.4 million	CM at Risk	Design Engineer	CM/GC Coordinator
			Rosamond Water Treatment Plant - Palmdale, CA	$17 million	CM at Risk	Design Engineer	CM/GC Coordinator

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Michael Price, P.E.	20 Years of experience from both owner and consultant side of planning, design and construction of municipal water projects	MWH	Preliminary design of 315 MGD UW and chemical feed Tesla Treatment Facility - City of San Francisco	$83 million	DB	Manager for Preliminary Design	Submittal review, O&M manual, commissioning
			Mission San José Water Treatment Plant - Alameda County Water District	$1.0 million	DB	Manager for Design	Submittal review, equipment procurement, startup
			Design on 75 MGD Lower Seletar Waterworks - Singapore PUB	$138 million (USD)	DB	Technical Specialist	Submittal review, startup
			Corona Del Mar Water Treatment Plant - Goleta, CA	$21 million	DB	Design Engineer	Resident Engineer Assistance
Robert Bingham, P.E.	34 Years of experience in utility engineering, planning, design and Alternative Project Delivery	R. W. Beck	WPCF Phase A Expansion	$36 million	GC/CM	Consultant PM	Consultant PM
			King County Brightwater Wastewater Treatment Plant	$500 million	GC/CM & DBB	Oversight Consultant	Oversight Consultant
			King County Brightwater Marine Outfall	$29 million	DB	Oversight Consultant	Oversight Consultant

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Robert Bingham, P.E.		R. W. Beck	City of Bellingham - Post Point Wastewater Treatment Plant Improvements	$37 million	GC/CM	Consultant PM	Consultant PM
			Tacoma Central Treatment Plant Expansion	$80 million	DB	Consultant PM	Consultant Advisor
			Seattle Tolt River Treatment Plant	$100 million	DBO	Consultant PM	Consultant PM
			Seattle Cedar River Treatment Plant	$78 million	DBO	Consultant PM	Consultant PM
			Wilsonville, Oregon Wastewater Treatment Plant	$50 million	DBO	Consultant Advisor	Consultant Advisor
Art Griffith, P.E.	15 Years of experience in utility engineering, planning, project oversight and financial analysis	R. W. Beck	King County Brightwater Wastewater Treatment Plant	$500 million	GC/CM & DBB	Oversight Consultant	Oversight Consultant
			King County Brightwater Marine Outfall	$29 million	DB	Oversight Consultant	Oversight Consultant

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Michael Purdy	30 Years of experience as a manager in public contracting and procurement with some of the largest government agencies in the State of Washington	Michael E. Purdy Associates	LOTT Alliance, Olympia, Washington - Budd Inlet Wastewater Treatment Plant upgrade	$31 million	GC/CM	Consultant Advisor	Consultant Advisor
			Sound Transit - University of Washington Station	$115 million	GC/CM	Consultant Advisor	Consultant Advisor
			City of Bellingham - West Point Wastewater Treatment Plant improvements	$37 million	GC/CM	Consultant Advisor	Consultant Advisor
		University of Washington	UW Construction of New Molecular Engineering Building	$52 million	GC/CM	Contracts Manager	Contracts Manager
			UW Construction of New Business School, PACCAR Hall	$64 million	GC/CM	Contracts Manager	Contracts Manager
			UW Medical Center Expansion Project	$124 million	GC/CM	Contracts Manager	Contracts Manager

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects	Construction Amount	Project Type	Role During Project Phases	
						Design	Construction
Michael Purdy		University of Washington	UW Husky Union building Renovation and Expansion	$83 million	GC/CM	Contracts Manager	Contracts Manager
			UW Housing - New Residence Halls, Phase 1	$109 million	GC/CM	Contracts Manager	Contracts Manager

Attachment C - Additional Team Experience on Alternative Delivery Projects, Continued

Name	Experience	Org/Firm	Projects
Thomas Wolfendale	37 Years as attorney, practice experience including counseling Washington Public Entities. Following under the heading "Projects" is a listing of notable GC/CM matters/projects/agencies he has counseled.	K&L Gates, LLP	-Pierce County New Correction Facility -Safeco Field -King County Library - Burien Town Center -King County Library - New Castle -Seattle Chinatown Village Square -Museum of History and Industry -Seattle Art Museum -Pike Place Market Renovation -Woodland Park Zoo -City of Yakima -Snohomish County PUD -Richland Public Facilities District -SCORE
Christopher Hirst	Legal practice experience in municipal and education law. He is a member of the Capital Projects Advisory Review Board. Following under the heading "Projects" is a listing of notable GC/CM school projects he has counseled.	K&L Gates, LLP	-Snohomish SD - Snohomish High School Renovation -Marysville SD - New Getchell High School -Northshore SD - Woodenville High School Renovation -Steilacoom SD - Steilacoom High School Renovation

Attachment D

Tacoma Water Project Management Team Relevant Construction History

Attachment D - Tacoma Water Project Management Team Relevant Construction History**

Project	Project Name	Description	Year Completed	Contracting Method	Staff Involved	Construction Cost
WTR-00028	Green River Headworks	Raise dam and reconstruct intake. Construct fish capture facility.	2004	Design Bid Build	Chris McMeen	$ 17,284,577
WTR-00023	Second Supply Pipeline - Headworks Section	1.7-miles of new steel transmission pipe, piping to accommodate Chemical Facility treatment at Green River Headworks.	2005	Design Bid Build	Chris McMeen	$ 12,670,350
WTR-00064	Chemical Facilities	Chemical Treatment Facilities (Chlorine, Caustic, Fluoride for 168 MGD future plant capacity.	2005	Design Bid Build	Chris McMeen	$ 8,161,737
WTR-00026	Ozone Facilities & Operations Center	168 MGD / 2800 ppd Ozone Treatment Facility and Operations Building	2007	Design Bid Build	Chris McMeen Craig Downs	$ 13,865,970
WTR-00301	Intake Bridge Replacement	Replacement of 100+ year old trestle bridge over Green River at Headworks Intake	2008	Design Bid Build	Chris McMeen Craig Downs	$ 1,323,811
WTR-00300/377	Headworks Road Replacement	Repair, rehabilitation, and pavement overlay of portions of Green River Headworks Road	2009	Design Bid Build	Chris McMeen Craig Downs	$ 330,295

****Note:** See Attachment C for Relevant Construction History on non-Tacoma Water projects for additional project management team members.

Attachment E

Project Responsibility Matrix

Attachment E - Responsibility Matrix

Project Responsibility Matrix

L - Lead, S - Support, R - Review

The objective in assembling the Project Team is to provide staff and advisors that are experienced in all aspects of contracting and administration, and that will work collaboratively with the GC/CM contractor. The Team consists of individuals from Tacoma Water, Regional Water Supply System Partners, outside legal counsel, design engineer (MWH), and the Owner Agent (R. W. Beck).

In identifying key individual roles and responsibilities, the further objective is to avoid unnecessary layers of management and responsibility based on individual affiliations. Although the Project Team staff comes from different organizations, the intent is for everyone to work together to the benefit of Tacoma Water.

Activity/Work Product	Deliverable	Chris McMeen	Project Manager (Randy Krueger)	Operations Staff	Legal Counsel (K&L Gates)	Regional Water Sypply System Partners	MWH	Art Griffith (R. W. Beck)	Bob Bingham (R. W. Beck)	Mike Purdy	Brown and Caldwell VE Support	GC/CM Contractor
PREDESIGN												
PRC Application. Preparation of PRC application	Advice and comments on PRC Application	S	L	S	S			S	S	S	S	
PRC Presentation. Preparation of, and participation in, PRC presentation	Advice and comments on PRC Presentation	S	L	S	S		S	S	S	S	S	
Request for Proposals (RFP). Preparation of draft and final RFP	Advice and comments on RFP	S	L	S	R		S	S	S	S		
Request for Final Proposals (RFFP). Preparation of draft and final RFFP	Advice and comments on RFFP	R	L	R	R			S	S	S		
Preconstruction Contract. Preparation of contract for GC/CM services during preconstruction phase	Advice and comments on Preconstruction Contract	R	L	R	R			S	S	S		
Construction Contract. In collaboration with outside legal counsel, prepare draft and final GC/CM Construction Contract	Advice and comments on Construction Contract	R	L	R	R			S	S	S		
General Conditions. Review Tacoma Water's standard General Conditions, modify as appropriate to suit the requirements of GC/CM contracting and the GC/CM project	Advice and comments on General Conditions	S	L	S	R		S	S	S	S		
Cost Allocation Matrix. Prepare Cost Allocation Matrix that clearly identifies all components of the Total Contract Cost (percent fee, specified general conditions, associated support services, etc.), including applicable section references to the project procurement documents (Preconstruction Contract, Construction Contract, General Conditions, and technical specifications).	Advice and comments on Cost Allocation Matrix	S	L	S	R		S	S	S	S		
Interviews. Organize and conduct in-person interviews of short-listed proposers	Participation in interviews	S	L	S		S	S	S	S	S		
DESIGN												
GC/CM Project Management Plan. Prepare preliminary plan describing the overall management of the project, including specific roles and responsibilities of the Tacoma Water, outside advisors, design engineer and selected GC/CM contractor. Prior to negotiation of the MACC, augment the plan by providing descriptions of the specific work activities required of the various parties during construction.	Draft and Final GC/CM Project Management Plan	R	L	S			S	S	S	R		S
Preconstruction Work Plan. Review and negotiate the detailed work plan prepared by the selected GC/CM contractor that will serve as the basis GC/CM's scope and budget included in the Preconstruction Contract	Review comments on Preconstruction Work Plan	R	S	R			R	R	R	R		L
Value Engineering at 30% Design. Conduct value engineering session	Value Engineering analysis	S	S	S			S	S	S	R	L	
Subcontracting Plan. Review how the GC/CM plans to package individual bid packages. Review the GC/CM plan for conducting the work with respect to which portions of the design will be subcontracted and which will be self-performed.	Review comments on Subcontracting Plan	S	S				R	R	R	R		L

Attachment E - Responsibility Matrix

Activity/Work Product	Deliverable	Chris McMeen	Project Manager (Randy Krueger)	Operations Staff	Legal Counsel (K&L Gates)	Regional Water Supply System Partners	MWH	Art Griffith (R. W. Beck)	Bob Bingham (R. W. Beck)	Mike Purdy	Brown and Caldwell VE Support	GC/CM Contractor
Construction Contract Packages. Review each subcontract bid package, prepared by the GC/CM, prior to bidding.	Review comments on construction contract packages	S	S				R	R	R	R		L
Early Subcontract Bidding/Selection. Identify available options for early bidding/selection, advantages and disadvantages, and if early bidding is used, identify specific procedures to be used by the GC/CM.	Advice and comments on early subcontract bidding	S	S	S			S	S	S	S		L
Construction Cost Control Plan. Tacoma Water, Owner Agent, Design Engineer, and GC/CM identify data requirements, reporting frequency and special requirements as may be needed for Tacoma Water to administer the GC/CM construction contract and resolve cost issues. Primary cost estimating functions are the responsibility of the Design Engineer and GC/CM.	Draft and Final Construction Cost Control Plan	S	L	S			S	S	S	S		L
Cost Estimating. Provide cost estimating to assist in resolving cost issues.	Cost estimating	R	S	R			L				R/S	L
Engineering/Technical Issues. Provide engineering assistance to help resolve technical issues.	Engineering assistance	R	R	R		S	L				S	L
MACC Strategy Development. Assist in developing overall negotiation strategy, including identifying technical, cost and contract issues that will need to be resolved during MACC negotiations. Ensures desired outcomes are consistent with the GC/CM process and helps protect the interests of Tacoma Water.	Participation in MACC strategy development session	S	L	S	R		S	S	S	S		
MACC Negotiation. Participate in formal MACC negotiation meetings with the selected GC/CM contractor.	Participation in MACC negotiation	S	L	S	R		S	S	S	S		L
CONSTRUCTION												
GC/CM Self-Performance Bidding. Administration of bidding for bid packages that the GC/CM intends to self-perform	Administration of bid packages	R	L	R			S	S	S	S		
Bid Solicitations. Review of the bid process conducted by the GC/CM	Review comments on bid solicitations	R	S	R	S		S	S	S	S		L
Adherence to Statutory and Contractual Obligations. Ongoing monitoring of key GC/CM activities (bidding, buyout, contingency, etc.)	None	R	L	R	S		R	S	S	R		
Regular Project Reporting (Schedule, Costs, Work Status). Review regular progress reports prepared by the GC/CM	None	R	R	R			R	R	R	R		L
Monitor Project Costs. Prepare summary project reporting of project cost, schedule and GC/CM specific activities such as project buyout and bidding of self-performed bid packages	Summary project report	S	L	S		S	R	L	S	S		S
Monitor Project Schedule. Track key schedule milestones	None	S	L	S			R	L	S	S		S
Field Support/Inspection. Any field inspection and testing needed for construction. Occasional independent verification by Owner Agent may be required.	None	S	L	S			L	S	S		S	L/S
Owner Contingency Usage. Tacoma Water evaluate GC/CM requests for use of Owner contingency (contractor/Owner initiated change order)	None	S	L	S			S	S	S	S		L/S
Risk Contingency Usage. Tacoma Water evaluate GC/CM requests for use of Risk contingency	None	S	L	S			S	S	S	S		L/S
Project Closeout and Reporting. Project closeout procedures and documentation including assessment of the GC/CM process	None	R	L	R			L	R/S	R/S	R/S		L

ROLES
Lead: Task management and responsibility for final deliverable, with support from appropriate staff; define objectives and policy decisions; manage production of final deliverables for task activities
Support: Activities performed by Project Team in support of the designated activity lead; strategic and administrative support
Review: Review relative to area of expertise

NOTE: Associated with the activities listed, there will be extensive work related to production of the deliverables. This work will be supported by consultant technical staff experienced in these areas at levels requested by Tacoma Water.

Attachment F

Tacoma Water Construction History

Attachment F - Tacoma Water Construction History (6 years)

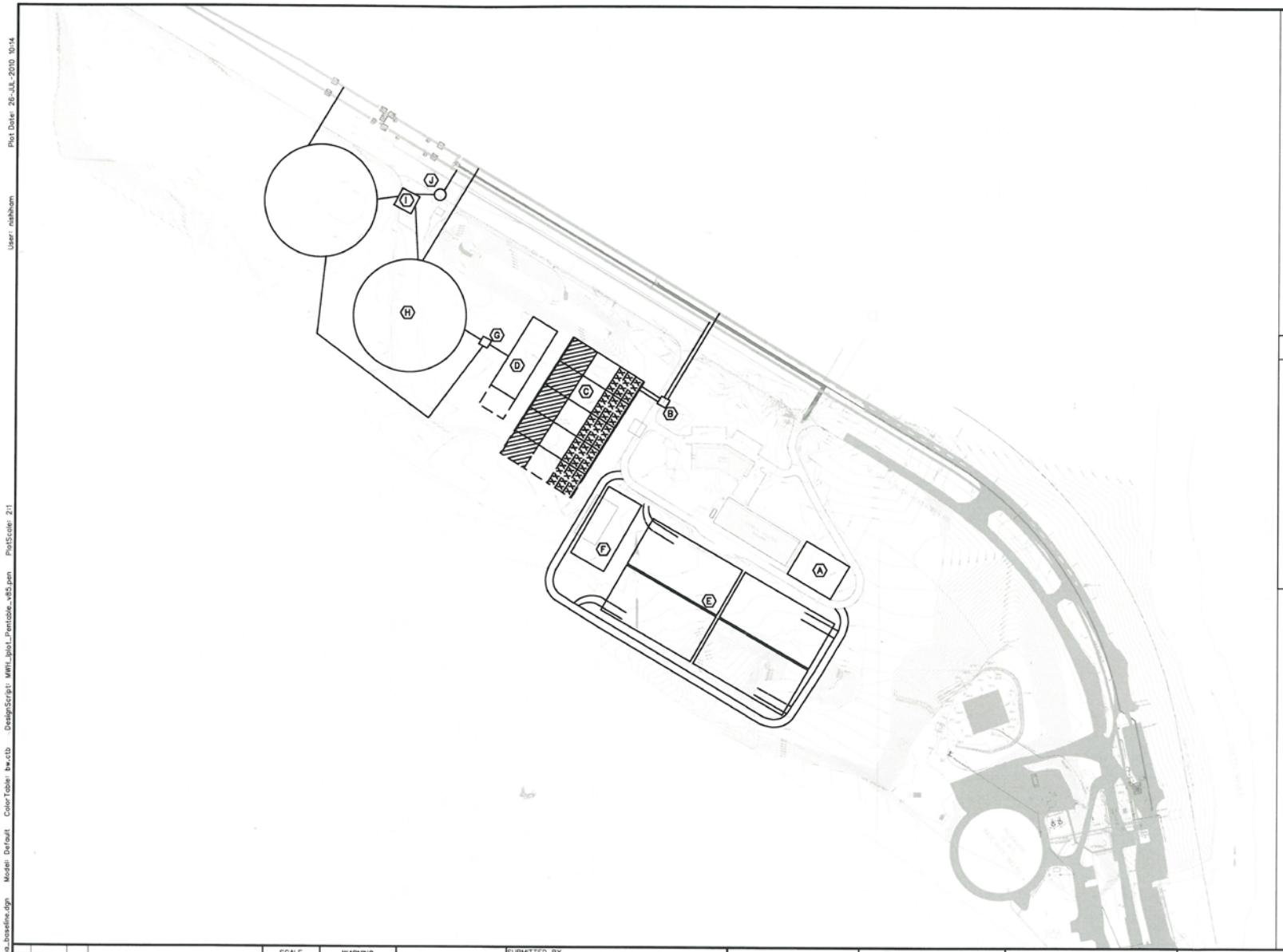
Project #	Project Name	Project Description	Contracting Method	Planned Start	Planned Finish	Actual Start	Actual Finish	Planned Budget	Actual Budget	Reason for Budget or Schedule Overturn
WTR-00028	Green River Headworks	Raise dam and reconstruct intake, construct fish capture facility	Design Bid Build	Aug-01	Oct-03	Aug-01	Jul-04	$ 16,370,000	$ 17,284,577	Substantially changed construction conditions, owner-initiated improvement (additional bypass screens).
WTR-00015 Spec 1741-W	Replace South Tacoma Flume Line	Replacement of concrete wells line with ductile iron pipe	Design Bid Build	Dec-03	Dec-04	Dec-03	Jan-05	$ 600,000	$ 554,690	
WTR-00125 WS04-0510F	Fennel Creek Pump Station	New pump station	Design Bid Build	Oct-04	Jan-05	Nov-04	Mar-05	$ 240,000	$ 299,581	Delays associated with dewatering pipe and additional fencing.
WTR-00064	Chemical Facilities	Chemical treatment facilities (Chlorine, Caustic, Fluoride) for 168 MGD future plant capacity	Design Bid Build	Aug-03	Dec-04	Aug-03	Aug-05	$ 7,940,000	$ 8,161,737	Design was modified to accommodate future ozonation treatment during construction, changed soil conditions.
WTR-00150-01 WS04-0832F	198th St Pump Station	New pump station	Design Bid Build	Apr-05	Jul-05	Apr-05	Sep-05	$ 600,000	$ 501,220	
WTR-00023	Second Supply Pipeline - Headworks Section	1.7-miles of new steel transmission pipe, piping to accommodate Chemical Facility treatment at Green River Headworks	Design Bid Build	Jul-04	Apr-05	Jul-04	Oct-05	$ 10,500,000	$ 12,670,350	Substantial steel price increase between engineers estimate and bid. Higher construction and fuel costs than estimated. (Contract awarded at $12,467,837.50). Owner Requested extra work extended finish date.
WS05-1007F	Pipe Modification at Sta E-29	Installed inchworm	Design Bid Build	Jan-06	Dec-06	Jan-06	May-06	$ 150,000	$ 152,042	Miscellaneous extra work added to contract
WTR-00150-02 WS05-0769F	Prairie Ridge Pump Station	New pump station	Design Bid Build	Jan-06	May-06	Feb-06	Sep-06	$ 1,200,000	$ 941,997	
WDP2004-4	Adams Street	Distribution Main Replacements	Design Bid Build	Jul-06	Jul-07	Jul-06	Jul-07	$ 2,029,000	$ 1,852,000	
WTR-00026	Ozone Facilities & Operations Center	168 MGD / 2800 ppd ozone treatment facility and operations building	Design Bid Build	Oct-05	Jun-07	Oct-05	Jul-07	$ 13,700,000	$ 13,865,970	Project was split into two for proposed staggering CM resources.
PRP2006-43	Portland Ave, E 26th - 38th	Distribution Main Replacements	Design Bid Build	Jun-07	Oct-07	Jun-07	Oct-07	$ 1,674,840	$ 1,267,811	
WDP2005-13	NE Tacoma System	Distribution Main Replacements	Design Bid Build	Feb-07	Nov-07	Feb-07	Nov-07	$ 2,216,000	$ 2,180,000	
WTR-00193 WS07-0020F	Well 2C	Drill new well	Design Bid Build	May-07	Oct-07	Apr-07	Jan-08	$ 625,000	$ 687,470	Aquifer was deeper than anticipated
MRP2006-18	S 80th and K	Distribution Main Replacements	Design Bid Build	May-07	Feb-08	May-07	Feb-08	$ 911,280	$ 885,043	

Attachment F - Tacoma Water Construction History (6 years)

Project #	Project Name	Project Description	Contracting Method	Planned Start	Planned Finish	Actual Start	Actual Finish	Planned Budget	Actual Budget	Reason for Budget or Schedule Overturn
WTR-00301	Intake Bridge Replacement	Replacement of 100+ year old trestle bridge over Green River at Headworks intake	Design Bid Build	Aug-06	Dec-08	Aug-06	Dec-08	$ 1,500,000	$ 1,323,811	
PRP2008-08	Asotin et al	Distribution Main Replacements	Design Bid Build	Oct-08	Mar-09	Oct-08	Mar-09	$ 707,803	$ 636,940	
MRP2006-17	S L St et al	Replacement of water main in South L Street from approximately South 8th to South 27th	Design Bid Build	Jan-08	Feb-09	Jan-08	Apr-09	$ 2,178,000	$ 2,239,000	Contract dollar amount and schedule increased to address concrete panel replacement that ended up being more intensive than previously thought.
WTR-00300/00377	Headworks Road Replacement	Repair, rehabilitation and pavement overlay of portions of Green River Headworks Road	Design Bid Build	Sep-09	Nov-09	Sep-09	Nov-09	$ 320,000	$ 330,295	
WTR-00195 WS08-0475F	Replace PL1 @ Puyallup River (Phase 1)	Replacement of approximately 1,000 linear feet of water transmission main	Design Bid Build	Oct-08	Dec-09	Oct-08	Nov-09	$ 2,545,000	$ 1,587,000	Pipe order delayed start of project
MRP2007-9	Stadium & Borough	Distribution Main Replacements	Design Bid Build	Jan-08	Mar-09	Jan-08	Apr-10	$ 3,769,161	$ 3,211,961	Project contained a HDD storm sewer extension that was added onto the project by the storm sewer utility. Permitting and construction delays for and during the HDD pushed the schedule beyond the planned finish.
WTR-00193 WS09-047F	Well 2C	Equip new well	Design Bid Build	Nov-09	Mar-10	Nov-09	May-10	$ 150,000	$ 158,000	Added MCC to scope of work permitting delayed project start
MRP2009-03	Caledonia	Distribution Main Replacements	Design Bid Build	Mar-10	Oct-10	Mar-10	Oct-10	$ 1,185,000	$ 924,442	
WTR-00338 WS09-0301F	McMillin Reservoir Replacement	Construction of two 33 million gallon potable water reservoirs	Design Bid Build	Jul-09	Dec-12	Aug-09	On-going	$ 55,000,000	$ 33,376,000	
PRP2009-02 MRP2009-26	Jefferson & South Tacoma Way	Distribution Main Replacements	Design Bid Build	Mar-10	Jan-11	Mar-10	On-going	$ 3,002,000	$ 1,980,000	Schedule slid due to inclusion of storm sewer work in the project and need to obtain City Council approval for participation in Tacoma Water Project (Final budget projected)

Attachment G

Baseline Site Layout and Aerial Views



SHEET KEYNOTES

A. CHEMICAL BUILDING ADDITION
B. RAPID MIXER
C. FLOCCULATION/SEDIMENTATION BASINS WITH PLATE SETTLERS (4, WITH ROOM FOR EXPANSION)
D. ANTHRACITE/SAND FILTERS (10, WITH ROOM FOR EXPANSION)
E. WASHWATER CLARIFICATION LAGOONS/SLUDGE DRYING BEDS (4)
F. CLARIFIED WASHWATER EQUALIZATION BASIN & RECYCLE PUMP STATION
G. FILTER EFFLUENT CONTROL WEIR BOX
H. 7.5 MG CIRCULAR CLEARWELL (2)
I. LOW LIFT PUMP STATION
J. STANDPIPE FOR P1

REV	DATE	BY	DESCRIPTION

SCALE 1"=125'

WARNING 0 ½ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED
DRAWN
CHECKED

SUBMITTED BY
CHARLIE BROMLEY LICENSE NO. DATE
MARK GRAHM LICENSE NO. DATE

TACOMA WATER
TACOMA PUBLIC UTILITIES

MWH
Bellevue Washington

CITY OF TACOMA
GREEN RIVER FILTRATION FACILITY

BASELINE SITE LAYOUT

SHEET
1530696

File: Tacoma_baseline.dgn Model: Default ColorTable: bw.ctb DesignScript: MWH_plot_Pentable_v85.pen PlotScale: 2:1 User: nishham Plot Date: 26-JUL-2010 10:14

Baseline Facility

Compact Facility